

CALCIUM DOPED POLYSILICON GATE ELECTRODES

ABSTRACT OF THE DISCLOSURE

5 A calcium doped polysilicon gate electrodes for PMOS containing semiconductor
of the gate electrode, through the gate dielectric and into the substrate thereby reducing the
boron penetration problem increasingly encountered with smaller device size regimes and
their thinner gate dielectrics. Calcium doping of the gate electrode may be achieved by a
variety of techniques. It is further believed that the calcium doping may improve the boron
10 dopant activation in the gate electrode, thereby further improving performance.